

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

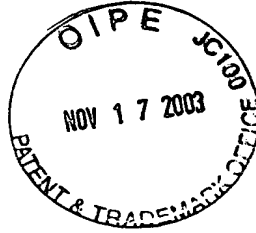
In re application of:

Liming TSAU

Appl. No. 09/753,664

Filed: January 4, 2001

For: **High Density Metal Capacitor  
Using Via Etched Stopping Layer  
as Field Dielectric in Dual-  
Damascene Interconnect Process**



Confirmation No. 1902

Art Unit: 2823

Examiner: K. Nguyen

Atty. Docket: 1875.0230000

**Supplemental Information Disclosure Statement**

Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

Sir:

Listed on accompanying Form PTO-1449 are documents that may be considered material to the examination of this application, in compliance with the duty of disclosure requirements of 37 C.F.R. §§ 1.56, 1.97 and 1.98.

Where the publication date of a listed document does not provide a month of publication, the year of publication of the listed document is sufficiently earlier than the effective U.S. filing date and any foreign priority date so that the month of publication is not in issue. Applicants have listed publication dates on the attached PTO-1449 based on information presently available to the undersigned. However, the listed publication dates should not be construed as an admission that the information was actually published on the date indicated.

Applicants reserve the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not

be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered.

This statement should not be construed as a representation that a search has been made, or that information more material to the examination of the present patent application does not exist. The Examiner is specifically requested not to rely solely on the material submitted herewith.

Applicants have checked the appropriate boxes below.

- ☐ 1. Statement under 37 C.F.R. 1.704(d). Each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in 37 C.F.R. § 1.56(c) more than thirty days prior to the filing of this information disclosure statement.
- ☐ 2. Filing under 37 C.F.R. § 1.97(b). This Information Disclosure Statement is being filed within three months of the date of filing of a national application other than a continued prosecution application (CPA), OR within three months of the date of entry of the national stage as set forth in 37 C.F.R. § 1.491 in an international application, OR before the mailing date of a first Office Action on the merits OR before the mailing of a first Office Action after the filing of a request for continued examination under 37 C.F.R. § 1.114. No statement or fee is required.
- ☐ 3. Filing under 37 C.F.R. § 1.97(c). This Information Disclosure Statement is being filed more than three months after the U.S. filing date AND after the mailing date of the first Office Action on the merits, but before the mailing date of a Final Rejection, or Notice of Allowance, or an action that otherwise closes prosecution in the application.
  - ☐ a. Statement under 37 C.F.R. § 1.97(e)(1). I hereby state that each item of information contained in this Information Disclosure Statement was

first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).

- ☐ b. Statement under 37 C.F.R. § 1.97(e)(2). I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).
- ☐ c. Attached is our PTO-2038 Credit Card Payment Form **[OR]** Check No. \_\_\_\_\_ in the amount of \$ \_\_\_\_\_ in payment of the fee under 37 C.F.R. § 1.17(p).
- ☒ 4. Filing under 37 C.F.R. § 1.97(d) This Information Disclosure Statement is being filed more than three months after the U.S. filing date and after the mailing date of a Final Rejection or Notice of Allowance, but before payment of the Issue Fee. Attached is our PTO-2038 Credit Card Payment Form **[OR]** Check No. \_\_\_\_\_ in the amount of \$ 180.00 in payment of the fee under 37 C.F.R. § 1.17(p); in addition:
  - ☒ a. Statement under 37 C.F.R. § 1.97(e)(1). I hereby state that each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).
  - ☐ b. Statement under 37 C.F.R. § 1.97(e)(2). I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more

than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).

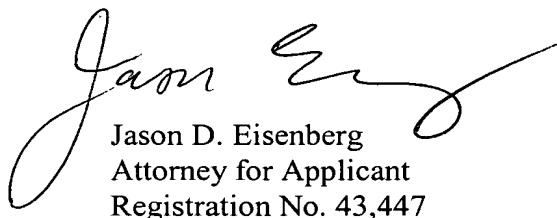
- ☒ 5. The documents were cited in a search report by a foreign patent office in a counterpart foreign application. A copy of the search report is attached as document AR1 on the enclosed Form PTO-1449.
- ☐ 6. A concise explanation of the relevance of the non-English language document(s) appears below:
- ☐ 7. Copies of the documents were cited by or submitted to the Office in an IDS that complies with 37 C.F.R. § 1.98(a)-(c) in Application No. \_\_\_\_\_, filed \_\_\_\_\_, which is relied upon for an earlier filing date under 35 U.S.C. § 120. Thus, copies of these documents are not attached. 37 C.F.R. § 1.98(d).

It is respectfully requested that the Examiner initial and return a copy of the enclosed PTO-1449, and indicate in the official file wrapper of this patent application that the documents have been considered.

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

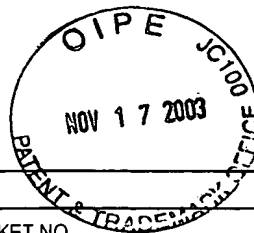
Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

  
Jason D. Eisenberg  
Attorney for Applicant  
Registration No. 43,447

Date: 11/17/03

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SKGF\_DC1:198908.1



FORM PTO-1449

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENTATTY. DOCKET NO.  
1875.0230000APPLICATION NO.  
09/753,664APPLICANT  
Liming TSAUFILING DATE  
January 4, 2001GROUP  
2823

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE
	AA1	6,081,021	06/2000	Gambino <i>et al.</i>			
	AB1						
	AC1						
	AD1						
	AE1						
	AF1						
	AG1						
	AH1						
	AI1						
	AJ1						
	AK1						

## FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION
	AL1	WO 00/46844	08/2000	PCT	H01L	21/02	Yes No
	AM1	EP 1 073 101 A1	01/2001	Europe	H01L	21/02	Yes No
	AN1						Yes No
	AO1						Yes No
	AP1						Yes No

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

	AR	1	Copy of European Search Report for Appln. No. EP 02 25 0004, September 26, 2003 (date of completion of search), 3 pages.
	AS	1	
	AT	1	

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered.  
Include copy of this form with next communication to Applicant.

*made*  
**Sterne Kessler  
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\*Admitted only in Maryland  
\*Admitted only in Virginia  
\*Practice limited to  
Federal Agencies

November 17, 2003

**WRITER'S DIRECT NUMBER:**

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Commissioner for Patents  
Mail Stop Issue Fee  
PO Box 1450  
Alexandria, VA 22313-1450

Art Unit 2823

Re: U.S. Utility Patent Application  
Appl. No. 09/753,664; Filed: January 4, 2001  
For: **High Density Metal Capacitor Using Via Etched Stopping Layer as Field  
Dielectric in Dual-Damascene Interconnect Process**  
Inventor: Liming Tsau  
Our Ref: 1875.0230000

Sir:

Transmitted herewith for appropriate action are the following documents:

1. Fee Transmittal;
2. Credit Card Payment Form PTO-2038;
3. Supplemental Information Disclosure Statement;
4. Form PTO-1449 with four (4) accompanying documents; and
5. Return postcard.

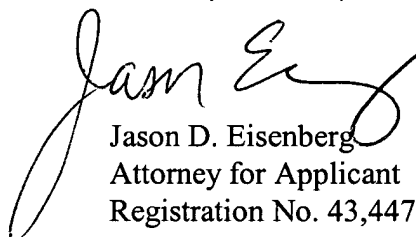
It is respectfully requested that the attached postcard be stamped with the date of filing of these documents, and that it be returned to our courier. In the event that extensions of time are necessary to prevent abandonment of this patent application, then such extensions of time are hereby petitioned.

Commissioner for Patents  
November 17, 2003  
Page 2

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.



Jason D. Eisenberg  
Attorney for Applicant  
Registration No. 43,447

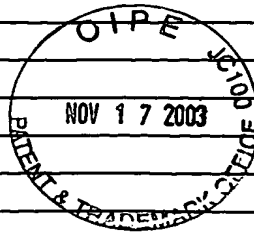
JDE/mmb  
SKGF\_DC1:200214.1

**FEE TRANSMITTAL  
for FY 2004**

Effective 10/01/2003. Patent fees are subject to annual revision.

☐ Applicant claims small entity status. See 37 CFR 1.27**TOTAL AMOUNT OF PAYMENT (\$180.00****Complete if Known**

Application Number	09/753,664
Filing Date	January 4, 2001
First Named Inventor	Liming Tsau
Examiner Name	K. Nguy n
Art Unit	2823
Attorney Docket No.	1875.0230000

**METHOD OF PAYMENT (check all that apply)**

☐ Check ☒ Credit card ☐ Money Order ☒ Other\*\* ☐ None  
 \*\* Charge any deficiencies or credit any overpayments in the fees or fee calculations of Parts 1, 2 and 3 below to Deposit Account No. 19-0036.

☐ Deposit Account  
 Deposit Account Number 19-0036  
 Deposit Account Name: Sterne, Kessler, Goldstein & Fox P.L.L.C.

**The Commissioner is authorized to: (check all that apply)**

☐ Charge fee(s) indicated below ☐ Credit any over payments  
☐ Charge any additional fee(s) during the pendency of this application  
☐ Charge fee(s) indicated below, **except for the filing fee** to the above-identified deposit account.

**FEE CALCULATION****1. BASIC FILING FEE**

Large Entity Small Entity

Fee Code	Fee (\$)	Fee Code	Fee (\$)	Fee Description	Fee Paid
1001	770	2001	385	Utility filing fee	
1002	340	2002	170	Design filing fee	
1003	530	2003	265	Plant filing fee	
1004	770	2004	385	Reissue filing fee	
1105	160	2005	80	Provisional filing fee	

**SUBTOTAL (1) (\$)****2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE**

	Extra	Fee from below	Fee Paid
Total Claims _____ - 20** = _____ X _____ = _____			
Indep. Claims _____ - 3** = _____ X _____ = _____			
Multiple Dependent _____ = _____			

Large Entity Fee Code	Large Entity Fee (\$)	Small Entity Fee Code	Small Entity Fee (\$)	Fee Description
1202	18	2202	9	Claims in excess of 20
1201	86	2201	43	Independent claims in excess of 3
1203	290	2203	145	Multiple dependent claim, if not paid
1204	86	2204	43	**Reissue independent claims over original patent
1205	18	2205	9	**Reissue claims in excess of 20 and over original patent

**SUBTOTAL (2) (\$)**

\*\*or number previously paid, if greater; For Reissue, see above

**FEE CALCULATION (continued)****3. ADDITIONAL FEES**

Large Entity Small Entity

Fee Code	Fee (\$)	Fee Code	Fee (\$)	Fee Description	Fee Paid
1051	130	2051	65	Surcharge - late filing fee or oath	
1502	50	2052	25	Surcharge-late provisional filing fee or cover sheet	
1053	130	1053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for <i>ex parte</i> reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	
1252	420	2252	210	Extension for reply within second month	
1253	950	2253	475	Extension for reply within third month	
1254	1,480	2254	740	Extension for reply within fourth month	
1255	2,010	2255	1,005	Extension for reply within fifth month	
1401	330	2401	165	Notice of Appeal	
1402	330	2402	165	Filing a brief in support of an appeal	
1403	290	2403	145	Request for oral hearing	
1451	1,510	1451	1,510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive - unavoidable	
1453	1,330	2453	665	Petition to revive - unintentional	
1501	1,330	2501	665	Utility issue fee (or reissue)	
1502	480	2502	240	Design issue fee	
1503	640	2503	320	Plant issue fee	
1460	130	1460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	180.00
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	770	2809	385	Filing a submission after final rejection (37 CFR 1.129(a))	
1810	770	2810	385	For each additional invention to be examined (37 CFR 1.129(b))	
1801	770	2801	385	Request for Continued Examination (RCE)	
1802	900	1802	900	Request for expedited examination of a design application	

Other fee (specify) \_\_\_\_\_

\* Reduced by Basic Filing Fee Paid **SUBTOTAL (3) (\$180.00****SUBMITTED BY**

Complete (if applicable)

Name (Print/Type)	Jason D. Eisenberg	Registration No. (Attorney/Agent)	43,447	Telephone	202-371-2600
Signature		Date	11/17/03		

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.SKGF\_DC1:200211.1